PHILIPS TECHNICAL REVIEW



1963/64

PHILIPS TECHNICAL REVIEW

A publication of the Research Laboratories of N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Twelve issues per year and an average of 32 pages per issue. The Review is published in four editions: English, Dutch, French and German, all identical in contents.

Editors

- S. Gradstein, Editor-in-chief
- M. Beun
- D. van Dalen
- E. Fischmann
- J. W. Miltenburg
- D. Wilkinson (English edition)

All rights reserved by N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Articles may be reproduced in whole or in part, provided that the editors are first notified and that the source "Philips Technical Review" is mentioned in full. Photographs and drawings for this purpose are available on request.

SUBJECT INDEX, VOLUME 25, 1963/64

| | Page | | Page |
|--|------|--|-------|
| Bearings (contactless -, gas -, spiral groove | 0 | Oscillator, LF - with very low distortion | - "8" |
| -) · · · · · · · · · · · · · · · · · · · | 253 | under non-linear loading | 22 |
| Cathode-ray tube, measurement of intensity | | Perception Research, Institute for — | 33 |
| distribution in spot | 152 | Perceptual work, measure of — | 56 |
| Contactless bearings | 253 | Phase errors, audibility of — | 176 |
| Delay lines, ultrasonic, and their applications | | Phonetic research | 43 |
| to television | 234 | Photoconductivity, principles; contacts on | |
| Diffusion studies with tracers, grinding ma- | | semiconductors | 120 |
| chine | 191 | Picture tube, implosion-proof | 81 |
| Displacement meters, determining magnetic | | Pitch, perception of — | 37 |
| quantities with — | 207 | "Plumbicon", television camera tube | 133 |
| DONDERS, the -, an electronic system for | | P-N luminescence in GaP | 20 |
| measuring human reactions | 64 | Power supply, stabilized 2000 V — with valves | |
| Electrometer, vibrating capacitor for — | 95 | and transistors | 181 |
| Filters, active, for low frequencies | 330 | Pupillary reflex, dependence on wavelength . | 50 |
| Fluorescent lamp with increased efficiency | 114 | Radar on 4 mm waves | 274 |
| Gallium phosphide, P-N luminescence | 20 | Reactions, measuring human - with the | |
| Gas bearings | 259 | DONDERS | 64 |
| Gas-filled lamp, 50 years of — | 2 | Reaction-time measurements, history of — . | 75 |
| Germanium, inhomogeneities in doped — | | Satellite communication systems, solid-state | |
| crystals | 195 | masers in — | 289 |
| Grinding machine for tracer diffusion studies | 191 | Silicon, inhomogeneities in doped — crystals | 195 |
| Image intensifier with electrostatic "zoom" | | Single-sideband modulation, "compatible" | 311 |
| optics | 88 | Solid-state masers | 289 |
| Incandescent lamp, 50 years of gas-filled — | 2 | Speaking machine of v. Kempelen | 48 |
| Inhomogeneities in doped Ge and Si crystals | 195 | Spiral groove bearings | 265 |
| Liquid nitrogen, production | 340 | Superconducting circuit, dynamo for — | 16 |
| Magnetic measurements on small samples | | Television camera tube "Plumbicon" | 133 |
| (vibration method) | 227 | Television picture tube, implosion-proof | 81 |
| Magnetic quantities, determination by dis- | | Television, applications of ultrasonic delay | |
| placement measurements | 207 | lines | 234 |
| Magnetic recording process, 5000:1 scale | | Telstar, solid-state maser used in — | 289 |
| model | 319 | "TL" lamp with increased efficiency | 114 |
| Magnetostatic fields, generation of strong — | | Transistors, behaviour with increasing fre- | 356 |
| with superconducting dynamo | 16 | quency | 156 |
| Magnetron, pulsed — for $2\frac{1}{2}$ mm waves | 217 | Transistors, combinations with valves in a | 101 |
| Masers, solid-state — and their use in satellite | | stabilized 2000 V power supply | 181 |
| communication systems | 289 | Ultrasonic delay lines | 234 |
| Modulation, "compatible" single-sideband — | 311 | Vibrating capacitor, for electrometer | 95 |
| Nitrogen, production of liquid — | 340 | Visual sensory system | 50 |
| Noematachograph | 75 | "Zoom" optics, image intensifier with electro- | 0.0 |
| Operations Research | 105 | static — | 88 |

AUTHOR INDEX, VOLUME 25, 1963/64

Articles marked with an asterisk * are short communications.

| | Page | | Page |
|--|-------|--|------|
| Allaries, H. | 1 ago | Nie, A. G. van and J. J. Zaalberg van Zelst | 0 |
| A 4 mm radar installation | . 274 | A vibrating capacitor driven by a high-frequency | |
| Beun, M. and L. J. Tummers | | electric field | 95 |
| The behaviour of transistors with increasing frequency | 156 | Nienhuis, W. F., see Boer, F. de | |
| Boer, F. de, P. Cirkel, W. F. Nienhuis and C. J. W. Panis | 3 | Noordermeer, L. J., see Oosterhout, G. W. van | |
| An implosion-proof picture tube for television | | Oosterhout, G. W. van and L. J. Noordermeer | |
| Boort, H. J. J. van | | Fast and accurate magnetic measurements on samples | |
| A tubular fluorescent lamp with increased luminous | | weighing a few milligrammes | 227 |
| efficiency | | Palfreeman, J. S., see Brockelsby, C. F. | |
| Bouma, H., H. W. Horeman and J. A. J. Roufs | | Panis, C. J. W., see Boer, F. de | |
| Some investigations of the visual sensory system . | . 50 | Plantinga, G. H. | |
| Brockelsby, C. F. and J. S. Palfreeman | | A pulsed magnetron for $2\frac{1}{2}$ mm waves | 217 |
| Ultrasonic delay lines and their applications to tele | _ | Ritsma, R. J. and B. Lopes Cardozo | |
| vision | | The perception of pitch | 37 |
| Cirkel, P., see Boer, F. de | | Roufs, J. A. J., see Bouma, H. | |
| Cohen, A. | | Schagen, P., see Woodhead, A. W. | |
| Phonetic research | . 43 | Schalkwijk, W. F. | |
| Dikhoff, J. A. M. | | Operations Research | 105 |
| Inhomogeneities in doped germanium and silicon | 1 | Schampers, P. P. M., see Haan, E. F. de | |
| crystals | | Scholz, H., see Glässer, W. | |
| Doesschate, G. ten | | Schouten, J. F. | |
| Notes on the history of reaction-time measurements | . 75 | The Institute for Perception Research | 33 |
| Domburg, J., see Schouten, J. F. | | — and J. Domburg | |
| Drift, A. van der, see Haan, E. F. de | | The DONDERS, an electronic system for measuring | |
| Enz, U. and H. Zijlstra | | human reactions | 64 |
| Determining magnetic quantities by displacement | | Smith, F. W., see Walling, J. C. | |
| measurements | | Taylor, D. G., see Woodhead, A. W. | |
| Glässer, W., H. G. Grimmeiss and H. Scholz | . 201 | Teer, K. | |
| * Luminescent P-N junctions in gallium phosphide . | . 20 | * The audibility of phase errors | 176 |
| Grimmeiss, H. G., see Glässer, W. | | Tjaden, D. L. A. and J. Leyten | |
| Haan, E. F. de, A. van der Drift and P. P. M. Schampers | | A 5000:1 scale model of the magnetic recording process | 319 |
| The "Plumbicon", a new television camera tube . | | Tummers, L. J., see Beun, M. | 0.27 |
| Heijne, L. | | Verheijke, M. L., see Leblans, L. M. L. J. | |
| Physical principles of photoconductivity, | | Volger, J. | |
| I. Basic concepts; contacts on semiconductors | . 120 | A dynamo for generating a persistent current in a | |
| Horeman, H. W., see Bouma, H. | | superconducting circuit | 16 |
| Kessel, T. J. van | | Walling, J. C. and F. W. Smith | |
| "Compatible" single-sideband modulation | . 311 | Solid state masers and their use in satellite communica- | |
| Klein, G. and J. J. Zaalberg van Zelst | | tion systems | 289 |
| A low-frequency oscillator with very low distortion | 1 | Weber, C. | |
| under non-linear loading | | * Measuring the light-intensity distribution in the spot | |
| Combinations of valves and transistors in a stabilized | | on a cathode-ray-tube screen | 152 |
| 2000 V power supply | . 181 | Westhoff, J. M. | |
| Some simple active filters for low frequencies | | In search of a measure of perceptual work | 56 |
| Leblans, L. M. L. J. and M. L. Verheijke | | Woodhead, A. W., D. G. Taylor and P. Schagen | |
| * A precision grinding machine for tracer diffusion studie | s 191 | An experimental image-intensifier tube with electro- | |
| Leyten, J., see Tjaden, D. L. A. | | static "zoom" optics | 88 |
| Lokker, J. C. | | Zaalberg van Zelst, J. J., see Klein, G. | - |
| Fifty years of the gas-filled lamp | . 2 | -, see Nie, A. G. van | |
| Lopes Cardozo, B., see Ritsma, R. J. | | Zijlstra, H., see Enz, U. | |
| Muijderman, E. A. | | | |
| New forms of bearing: the gas and the spiral groov | e | | |
| bearing | . 253 | | |